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NEW HAMPSHIRE
AGRICULTURAL EXPERIMENT STATION
DEPARTMENT OF CHEMISTRY

THE FERTILIZER INSPECTION FOR 1913

MADE FOR THE
DEPARTMENT OF AGRICULTURE

BY B. E. CURRY AND T. O. SMITH

NEW HAMPSHIRE COLLEGE
OF
AGRICULTURE AND MECHANIC ARTS
DURHAM, N. H.

NEW HAMPSHIRE COLLEGE OF AGRICULTURE AND THE MECHANIC ARTS.

NEW HAMPSHIRE AGRICULTURAL EXPERIMENT STATION

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The bulletins of the Experiment Station are published at irregular intervals and are sent *free* to all residents of New Hampshire requesting them.

The samples of fertilizer for the 1913 inspection were collected by Messrs. R. E. Skinner and W. A. Cole under the direction of the State Board of Agriculture. Aside from duplicates 187 samples were received by the State Agricultural Experiment Station for analysis.

Not all of the licensed brands of fertilizers were sampled because in some instances the goods were distributed directly from the cars in which shipment was made. In some of these instances, the goods were used very shortly after they were distributed. On this account it was not possible to sample all the brands which came into the state.

The brands which were sampled cover fairly well almost any quality of goods that can be desired for any ordinary purpose. The careful buyer should be able to find in the list a number of brands almost equally satisfactory for his needs. The New Hampshire farmer should use high grade fertilizers which carry relatively large amounts of nitrogen. These will show the largest returns under average conditions.

Messrs. D. B. Keyes, H. Eastman, M. Broggini and J. Bonardi assisted in the preparation of the following data.

Composition of Commercial Fertilizers Sampled and Analyzed in 1913.

MANUFACTURER AND BRAND.	NITROGEN.				PHOSPHORIC ACID.							POTASH.	
			Total.				Available.			Total.			
	Inorganic.	Organic.	Found.	Guaran-teed.	Soluble.	Reverted.	Found.	Guaran-teed.	Insoluble.	Found.	Guaran-teed.	Found.	Guaranteed.
AMERICAN AGRICULTURAL CHEMICAL CO., New York City.													
Complete Manure for Top-Dressing	3.30	1.64	4.94	4.94	2.04	2.64	4.68	4.00	1.70	6.38	5.00	6.12	6.00
Fine Ground Bone	.....	.....	2.32	2.47	.....	.....	.....	.....	.....	25.90	22.88	.....	.....
Grass and Lawn Top-Dressing	3.61	0.30	3.91	3.91	2.80	2.98	5.78	5.00	1.06	6.84	6.00	2.53	2.00
Grass and Oats Fertilizer	.....	.....	.....	.....	8.08	3.27	11.35	11.00	.89	12.24	12.00	2.23	2.00
High Grade Fertilizer with 10% Potash	1.62	1.18	2.80	2.47	4.83	1.22	6.05	6.00	2.13	8.18	7.00	10.23	10.00
Muriate of Potash	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	50.48	49.00
New Hampshire Special Chemical Mixture	.80	.86	1.66	1.65	7.05	1.61	8.66	8.00	1.33	9.91	9.00	5.12	5.00
Nitrate of Soda	.....	.....	15.25	15.00	.....	.....	.....	.....	.....	.....	.....	.....	.....
Plain Super-Phosphate 14%	.....	.....	.....	.....	12.23	2.50	14.73	14.00	1.19	15.92	15.00	.....	.....
Pacific Potato Special	.57	1.49	2.06	2.06	4.38	3.87	8.25	8.00	1.94	10.19	9.00	3.13	3.00
14% Plain Super-Phosphate	.....	.....	.....	.....	12.16	2.26	14.42	14.00	2.41	16.83	15.00	.....	.....
Soluble Pacific Guano	1.02	1.05	2.07	2.06	6.25	2.24	8.49	8.00	1.54	10.03	9.00	1.80	1.50
Special Grass and Garden Mixture	7.00	1.47	8.47	8.43	2.69	3.33	6.02	6.25	2.41	8.43	7.25	8.35	8.25
Special Vegetable Guano	2.30	.95	3.25	3.29	4.35	3.87	8.22	8.00	1.78	10.00	9.00	7.73	7.00
10% Vegetable and Potato Manure	1.06	.81	1.87	1.65	5.98	3.07	9.05	8.00	1.25	10.30	9.00	9.62	10.00
Bradley's Complete Manure for Corn and Grain	2.10	1.26	3.36	3.29	5.26	3.11	8.37	8.00	2.06	10.43	9.00	7.15	7.00
Bradley's Complete Manure for Potatoes and Vegetables	2.30	.99	3.29	3.29	5.78	3.16	8.94	8.00	1.74	10.68	9.00	7.31	7.00
Bradley's Complete Manure for Top-Dressing Grass and Grain	4.46	.48	4.94	4.94	3.05	.97	4.02	4.00	1.11	5.13	5.00	6.57	6.00
Bradley's Complete Manure with 10% Potash	2.13	1.09	3.22	3.29	3.59	3.05	6.64	6.00	2.26	8.90	7.00	10.32	10.00
Bradley's Corn Phosphate	1.61	.59	2.20	2.06	6.83	2.51	9.34	8.00	1.76	11.10	9.00	1.82	1.50
Bradley's Eclipse Phosphate for all Crops	.27	.76	1.03	1.03	6.29	2.50	8.79	8.00	2.49	11.28	9.00	2.07	2.00
Bradley's Potato Fertilizer	1.78	.48	2.26	2.06	6.93	1.39	8.32	8.00	2.28	10.60	9.00	3.15	3.00
Bradley's Potato Manure	1.86	.69	2.55	2.47	4.00	2.64	6.64	6.00	1.76	8.40	7.00	5.49	5.00
Bradley's Seeding-Down Manure	.77	1.78	2.55	2.47	7.38	3.03	10.41	9.00	2.08	12.49	10.00	2.41	2.00

Bradley's XL Super-Phosphate of Lime	1.97	.51	2.48	2.47	6.85	3.00	9.85	9.00	1.65	11.50	10.00	2.31	2.00
Cleveland Fertilizer for all Crops	.20	.97	1.17	1.03	6.33	2.81	9.17	8.00	1.96	11.13	9.00	2.13	2.00
Cleveland Potato Phosphate	.98	1.08	2.06	2.06	7.45	1.62	9.07	8.00	2.31	11.38	9.00	3.59	3.00
Cleveland Super Phosphate	.94	1.13	2.07	2.06	6.95	1.26	8.21	8.00	2.80	11.02	9.00	1.71	1.50
Cumberland Potato Fertilizer	1.25	1.46	2.71	2.05	6.25	2.65	8.90	8.00	2.30	11.20	9.00	3.11	3.00
Cumberland Super-Phosphate	.68	1.38	2.06	2.06	6.28	2.72	9.00	8.00	1.96	10.96	9.00	1.66	1.50
Crocker's Ammoniated Corn Phosphate	.98	1.13	2.11	2.06	7.08	1.76	8.84	8.00	2.25	11.09	9.00	1.85	1.50
Crocker's New Rival Ammoniated Super-Phosphate	.25	.78	1.03	1.03	5.18	3.02	8.20	8.00	2.13	10.33	9.00	2.28	2.00
Crocker's Potato, Hop and Tobacco Phosphate	.98	1.06	2.04	2.06	7.91	1.16	9.07	8.00	1.78	10.85	9.00	3.31	3.00
Crocker's Special Potato Manure	2.22	1.20	3.42	3.29	3.70	2.87	6.57	6.00	2.32	8.90	7.00	9.65	10.00
Darling's Blood, Bone and Potash	2.14	1.61	5.78	4.11	1.80	3.33	8.13	7.00	1.89	10.02	8.00	7.44	7.00
Darling's Farm Favorite	.71	1.36	2.07	2.06	7.25	1.77	9.02	8.00	2.86	11.88	9.00	3.68	3.00
Darling's General Fertilizer	.44	1.30	1.74	1.23	4.95	1.57	6.52	6.00	2.84	9.36	7.00	3.34	3.00
Darling's Potato Manure	1.62	.70	2.32	2.47	4.91	2.26	7.17	6.00	2.04	9.21	7.00	6.18	5.00
Great Eastern Complete Manure	1.69	.81	2.50	2.47	4.71	1.62	6.33	6.00	2.06	8.33	7.00	10.28	10.00
Great Eastern General Fertilizer	.31	.73	1.04	.82	7.50	.85	8.35	8.00	1.74	10.06	9.00	5.47	4.00
Great Eastern Northern Corn Special	1.23	.77	2.00	2.06	7.89	1.30	9.19	8.00	1.82	11.08	9.00	1.60	1.50
Great Eastern Potato Manure	.98	1.04	2.02	2.06	6.80	2.07	8.87	8.00	1.86	10.73	9.00	3.00	3.00
Packer's Union Animal Corn Fertilizer	1.47	1.18	2.65	2.47	8.00	1.53	9.53	9.00	2.66	12.19	10.00	2.48	2.00
Packer's Union Gardener's Complete Manure	1.81	.99	2.80	2.47	4.63	1.52	6.15	6.00	2.01	8.16	7.00	10.36	10.00
Packer's Union Potato Manure	.79	1.28	2.07	2.06	6.46	2.48	8.94	8.00	1.93	10.87	9.00	6.56	6.00
Packer's Union Universal Fertilizer	.38	.73	1.11	.82	5.53	2.74	8.27	8.00	2.03	10.30	9.00	4.65	4.00
Quinnipiac Corn Manure	.72	1.43	2.15	2.06	6.80	3.26	10.06	8.00	2.14	12.20	9.00	1.80	1.50
Quinnipiac Potato Phosphate	1.30	.78	2.08	2.06	4.89	3.33	8.22	8.00	2.82	11.04	9.00	3.40	3.00
Read's Practical Potato Special	.63	.65	1.28	.82	2.89	1.44	4.33	4.00	2.43	6.76	5.00	7.00	8.00
Read's High Grade Farmers' Friend Super-Phosphate	1.82	1.50	3.32	3.29	3.40	3.03	6.43	6.00	2.16	8.59	7.00	10.28	10.00
Read's Farmers' Friend Super-Phosphate	.85	1.17	2.02	2.06	5.84	2.23	8.07	8.00	2.36	10.43	9.00	3.34	3.00
Read's Vegetable and Vine Fertilizer	1.15	1.14	2.29	2.06	5.94	2.74	8.68	8.00	2.42	11.10	9.00	7.13	6.00
Williams & Clark Americus Corn Phosphate	1.19	1.23	2.42	2.06	5.04	3.18	8.22	8.00	2.79	11.01	9.00	2.45	1.50
Williams & Clark Americus Potato Manure	.75	1.38	2.13	2.06	7.13	2.09	9.22	8.00	2.59	11.81	9.00	3.53	3.00
Williams & Clark Prolific Crop Producer	.62	.50	1.12	.82	4.63	2.37	7.00	7.00	3.09	10.09	8.00	1.43	1.00
ARMOUR FERTILIZER WORKS, Chrome, N. J.													
All Soluble	1.41	1.75	3.16	3.29	6.33	2.45	8.78	8.00	2.20	10.98	8.50	4.51	4.00
Bone, Blood and Potash	2.75	1.97	4.72	4.11	7.35	1.12	8.47	8.00	2.18	10.65	8.50	7.02	7.00
Complete Potato	1.48	1.84	3.32	3.29	4.24	1.76	6.00	6.00	1.50	7.50	6.50	10.80	10.00
Crop Grower	.21	.97	1.18	.82	5.81	2.55	8.36	8.00	2.05	10.41	8.50	2.53	2.00
Fruit and Root Crop Special	.25	1.48	1.73	1.65	6.70	2.02	8.72	8.00	1.10	9.82	8.50	5.30	5.00
Grain Grower	.21	1.52	1.73	1.65	5.76	2.71	8.50	8.00	1.71	10.21	8.50	2.55	2.00
Armour's High Grade Potato	.16	1.49	1.65	1.65	6.70	1.63	8.33	8.00	1.10	9.43	8.50	10.69	10.00
Armour's Special Corn Manure	1.55	1.39	2.94	3.29	5.30	3.00	8.30	8.00	1.41	9.71	8.50	4.44	4.00

Composition of Commercial Fertilizers Sampled and Analyzed in 1913—Continued.

MANUFACTURER AND BRAND.	NITROGEN.				PHOSPHORIC ACID.							POTASH.	
			Total.				Available.			Total.			
	Inorganic.	Organic.	Found.	Guaranteed.	Soluble.	Reverted.	Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Found.	Guaranteed.
Beach Soap Co., Lawrence, Mass.													
Beach's Fertilizer Bone	.....	.....	1.60	2.67	.....	.....	.....	.....	.....	21.22	20.00	.....	.....
Beach's Market Garden Brand Fertilizer	2.43	2.35	4.78	4.74	.76	4.60	5.36	7.00	4.93	10.29	8.00	10.15	9.75
Beach's Top-Dressing Brand Fertilizer	4.15	1.45	5.60	5.35	1.78	2.22	4.00	4.00	3.50	7.50	7.00	15.64	15.00
Bowker Fertilizer Co., Boston and New York.													
Bowker's 14% Acid Phosphate	.....	.....	....	.....	11.26	3.72	14.98	14.00	1.85	16.83	15.00	.....	.....
Bowker's Corn Phosphate	.84	.84	1.68	1.65	6.50	2.29	8.79	8.00	2.15	10.94	9.00	2.48	2.00
Bowker's Early Potato Manure	1.74	1.55	3.29	3.29	5.33	3.37	8.70	8.00	2.25	10.95	9.00	7.52	7.00
Bowker's Farm and Garden Phosphate	.56	1.13	1.69	1.65	6.66	2.84	9.50	8.00	2.35	11.85	9.00	2.26	2.00
Bowker's Fresh Ground Bone	.....	.....	2.48	2.47	.....	.....	.....	.....	.....	24.13	22.88	.....	.....
Bowker's Fruit Tree Fertilizer	1.93	.60	2.53	2.47	8.44	2.21	10.65	10.00	2.35	13.00	11.00	8.07	8.00
Bowker's Highly Nitrogenous Formula	6.49	1.74	8.23	8.23	2.48	4.55	7.03	7.00	2.11	9.41	8.00	8.40	8.00
Bowker's Hill and Drill Phosphate	1.25	1.34	2.59	2.47	7.48	2.67	10.15	9.00	1.89	12.04	10.00	2.28	2.00
Bowker's Market Garden Fertilizer	2.00	1.00	3.00	2.47	5.61	1.08	6.69	6.00	1.99	8.68	7.00	9.09	10.00
Muriate of Potash	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	49.20	49.00
Nitrate of Soda	.....	.....	15.09	15.00	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bowker's Potash or Staple Phosphate	.23	.75	.98	.82	5.31	3.01	8.32	8.00	2.14	10.46	9.00	3.28	3.00
Bowker's Potato and Vegetable Fertilizer	1.25	1.25	2.50	2.47	6.09	1.92	8.01	8.00	3.14	11.15	9.00	4.20	4.00
Bowker's Potato and Vegetable Phosphate	.96	.72	1.68	1.65	4.80	3.66	8.46	8.00	1.84	10.30	9.00	2.22	2.00
Pulverized Sheep Manure	.....	.....	2.31	1.25	.....	.....	.....	.....	.....	2.88	1.50	3.63	2.00
Special Mixture	2.13	1.23	3.36	.....	6.00	1.70	7.70	.....	2.15	9.85	.....	10.53	.....
Bowker's Sure Crop Bone Phosphate	.20	.75	.95	.82	7.00	1.60	8.60	8.00	1.85	10.45	9.00	2.10	2.00

Stockbridge Special Complete Manure for Corn and Grain Crops	2.40	.91	3.31	3.29	7.88	3.20	11.08	10.00	1.69	11.68	11.00	7.19	7.00
Stockbridge Special Complete Manure for Potatoes and Vegetables	2.49	.80	3.29	3.29	4.31	2.23	6.54	6.00	1.71	8.25	7.00	10.22	10.00
Stockbridge Special Complete Manure for Seeding Down, Permanent Dressing and Legumes	1.94	.66	2.60	2.47	8.45	2.99	11.44	10.00	1.54	12.98	11.00	8.04	8.00
Stockbridge Special Complete Manure for Top-Dressing and Forcing	3.28	1.48	4.76	4.94	1.73	1.21	5.94	4.00	.99	6.93	5.00	6.07	6.00
Joseph Breck & Sons Corp., Boston, Mass.													
Ram's Head Brand Pulverized Sheep Manure	.....	.....	2.30	2.25	.....	.....	.....	.....	.....	2.15	1.50	2.47	1.50
The Coe Mortimer Co., New York City.													
E. Frank Coe's Celebrated Special Potato Fertilizer	.72	1.07	1.79	1.65	6.51	1.95	8.46	8.00	1.79	10.27	9.00	3.99	4.00
E. Frank Coe's Columbian Corn and Potato Fertilizer	1.01	.65	1.66	1.23	6.18	3.61	9.79	8.50	1.76	11.35	9.50	2.92	2.50
E. Frank Coe's Extra Special Potato Fertilizer and Fruit Grower	1.02	1.07	2.09	1.65	6.34	2.42	8.76	8.00	1.38	10.14	9.00	10.04	10.00
E. Frank Coe's High Grade Ammoniated Super-Phosphate	.90	.95	1.85	1.85	6.05	2.26	8.31	8.00	2.75	11.06	9.00	3.43	3.00
E. Frank Coe's New England Corn and Potato Fertilizer	.28	.72	1.00	.82	5.33	3.17	8.50	8.00	1.94	10.44	9.00	3.47	3.00
E. Frank Coe's Special Grass Top-Dressing	3.47	1.46	4.93	4.94	3.94	1.24	5.18	4.00	1.19	6.37	5.00	3.38	3.00
E. Frank Coe's Standard Potato Fertilizer	2.22	1.00	3.22	3.20	4.43	1.71	6.14	6.00	2.32	8.46	7.00	10.02	10.00
E. Frank Coe's XXV Ammoniated Phosphate	.87	.48	1.35	.82	2.19	5.62	7.81	8.00	1.79	9.60	9.00	3.13	2.00
Essex Fertilizer Co., Boston, Mass.													
Basic Slag	.....	.....	.....	.....	.....	.....	.....	.....	.....	18.71	.....	.....	.....
Essex Complete Manure for Corn, Grain and Grass	.31	3.17	3.48	3.28	4.00	1.81	5.81	6.00	2.60	8.41	7.00	10.05	10.00
Essex Complete Manure for Potatoes, Roots and Vegetables	.24	3.06	3.30	3.28	4.56	1.85	6.41	6.00	2.03	8.44	7.00	10.00	10.00
Dried Blood	.....	.....	9.36	9.84	.....	.....	.....	.....	.....	.....	.....	.....	.....
Essex Dry Ground Fish	.....	.....	7.62	7.50	.....	.....	.....	.....	.....	7.23	11.00	.....	.....
Essex Ground Bone (for Drawback)	.....	.....	2.29	2.45	.....	.....	.....	.....	.....	26.49	23.00	.....	.....
Essex Market Garden and Potato Manure	.11	2.03	2.17	2.00	6.73	1.79	8.52	8.00	2.71	11.23	9.00	5.36	5.00
Essex XXX Fish and Potash for all Crops	.21	2.23	2.44	2.00	6.49	1.58	8.07	8.00	2.36	10.43	9.00	3.34	3.00
S. C. Harves, Hampton Falls, N. H.													
Ground Bone and Tankage	.....	.....	3.50	.....	.....	.....	.....	.....	.....	16.50	.....	.....	.....

Composition of Commercial Fertilizers Sampled and Analyzed in 1913—Continued.

MANUFACTURER AND BRAND.	NITROGEN.				PHOSPHORIC ACID.							POTASH.	
			Total.				Available.			Total.			
	Inorganic.	Organic.	Found.	Guaranteed.	Soluble.	Reverted.	Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Found.	Guaranteed.
INTERNATIONAL AGRICULTURAL CORP., Buffalo, N. Y.													
Bone Meal	.....	.....	2.60	2.40	.....	.....	.....	.....	.....	21.71	22.00	.....	.....
Celery and Potato Special	.39	1.29	1.68	1.60	7.49	1.56	8.85	8.00	1.46	10.31	9.00	10.67	10.00
Extra Phosphate and Potash	.....	.....	.....	.....	8.36	2.18	10.51	10.00	1.66	12.20	11.00	8.19	8.00
Farmers' Choice	.31	.72	1.06	.80	5.31	3.36	8.70	8.00	1.68	10.38	9.00	5.57	5.00
High Grade Manure	2.01	.99	3.00	3.30	5.50	2.49	7.99	7.00	2.34	10.33	8.00	9.28	10.00
New England Special	.54	1.21	1.75	1.60	7.56	1.44	9.00	9.00	3.11	12.11	10.00	5.81	5.00
Top-Dresser	3.99	1.71	5.70	5.70	5.30	1.85	7.15	6.00	1.60	8.75	7.00	5.21	5.00
Vegetable and Potato	1.90	.74	2.64	2.40	6.44	2.62	9.06	8.00	1.74	10.80	9.00	7.59	7.00
GERMAN KALI WORKS, Baltimore, Md.													
German Kainit	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	14.18	12.00
LISTER'S AGRICULTURAL CHEMICAL CO. (Manufactured by American Agricultural Chemical Co.)													
Lister's Grain and Grass Fertilizer	.....	.....	.....	.....	7.33	3.39	10.72	10.00	1.28	12.00	11.00	2.50	2.00
Lister's High Grade Special for Spring Crops	1.32	.70	2.02	1.65	7.44	1.10	8.54	8.00	1.51	10.05	9.00	10.12	10.00
Lister's Potato Manure	2.25	1.04	3.29	3.29	6.41	2.57	8.98	8.00	1.40	10.38	9.00	7.26	7.00
Lister's Special Corn Fertilizer	.64	.59	1.23	1.23	5.81	2.82	8.90	8.00	1.40	10.30	9.00	3.31	3.00
Lister's Special Potato Fertilizer	.81	.94	1.75	1.65	5.42	3.00	8.52	8.00	1.94	10.46	9.00	3.70	3.00
Lister's Success Fertilizer	.81	.46	1.27	1.23	6.01	3.23	9.24	9.00	1.81	11.05	10.00	2.15	2.00

LOWELL FERTILIZER CO., Boston, Mass.													
Lowell Acid Phosphate	.....	.....	.....	.....	9.25	3.80	13.05	12.00	2.26	15.41	11.00	.....	.....
Lowell Animal Brand for all Crops	.22	2.18	2.70	2.46	6.40	2.02	8.42	8.00	2.91	11.33	9.00	4.40	4.00
Lowell Bone Fertilizer for Corn, Grain, Grass and Vegetables	.10	1.59	1.69	1.61	5.93	2.10	8.03	8.00	1.61	9.64	9.00	3.22	3.00
Lowell Cereal Fertilizer	.18	.88	1.06	.82	5.48	1.76	7.24	7.00	1.30	8.54	8.00	1.68	1.00
Lowell Corn and Vegetable	.25	3.20	3.45	3.28	6.44	1.66	8.10	8.00	2.76	10.86	9.00	4.96	7.00
Lowell Empress Brand for Corn, Potatoes and Grain	.12	1.28	1.40	1.24	6.80	1.72	8.52	7.00	1.51	10.06	8.00	2.35	2.00
Lowell Empress Brand for General Use	.13	1.26	1.39	1.25	6.28	1.27	7.55	7.00	1.89	9.44	8.00	2.00	2.00
Lowell Grass Mixture for Top-Dressing and Lawns	.31	.03	4.34	1.10	4.91	2.45	7.36	7.00	2.09	9.45	8.00	6.21	6.00
Lowell Ground Bone	.....	.....	2.52	2.46	.....	.....	.....	.....	.....	25.33	23.00	.....	.....
Ground Tankage	.....	.....	7.71	7.41	2.99	4.58	7.57	.....	4.20	11.77	9.15	.....	.....
Lowell Potato Grower with 10% Potash	.24	3.30	3.54	3.28	4.18	2.15	6.33	6.00	1.90	8.23	7.00	9.60	10.00
Lowell Potato Manure	.20	1.44	1.64	1.64	5.75	1.39	7.14	7.00	1.86	9.00	8.00	3.75	4.00
Lowell Potato Phosphate	.28	2.21	2.49	2.46	5.88	3.00	8.88	8.00	1.80	10.68	9.00	5.99	6.00
Lowell Special Potato Fertilizer with 10% Potash	.25	2.30	2.55	2.46	3.36	2.81	7.17	6.00	2.03	9.20	7.00	10.00	10.00
Lowell Superior Fertilizer with 10% Potash	.20	3.51	3.71	3.69	5.04	2.30	7.34	7.00	2.19	9.53	8.00	9.37	10.00
Nitrate of Soda	.....	.....	15.02	15.00	.....	.....	.....	.....	.....	.....	.....	.....	.....
Special Mixture	5.56	.79	6.35	.....	1.15	4.53	5.68	.....	6.66	11.74	.....	10.04	.....
Lowell Sterling Phosphate	.10	.68	.78	.82	6.09	3.91	10.03	8.00	1.30	11.33	9.00	4.10	4.00
Lowell Sulphate of Potash	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	49.65	48.00
Lowell Vegetable and Grain Fertilizer	.15	1.62	1.77	1.64	6.23	1.87	8.10	8.00	2.10	10.20	9.00	9.31	10.00
THE NATIONAL FERTILIZER CO., New York and Boston.													
Chittenden's Ammoniated Bone Phosphate	1.02	.74	1.76	1.65	2.50	7.90	10.40	8.00	2.03	12.43	9.00	2.19	2.00
Chittenden's Complete Root and Grain Fertilizer	2.19	1.22	3.41	3.29	5.69	2.45	8.14	8.00	2.95	11.19	9.00	6.54	6.00
Chittenden's Eureka Potato Fertilizer	1.70	1.25	2.95	2.47	3.89	2.50	6.39	6.00	2.56	8.95	7.00	10.04	10.00
Chittenden's Potato Phosphate	1.33	.88	2.21	2.06	7.21	1.35	8.56	8.00	2.45	11.01	9.00	6.56	6.00
Chittenden's Universal Phosphate	.39	.75	1.14	.82	5.10	3.27	8.37	8.00	2.28	10.65	9.00	5.30	5.00
NEW ENGLAND FERTILIZER CO., Boston, Mass.													
New England Complete Manure with 10% Potash	.18	3.10	3.28	3.28	3.16	3.49	6.65	6.00	2.88	9.53	7.00	10.10	10.00
New England Corn and Grain Fertilizer	.20	1.18	1.38	1.24	6.46	.95	7.41	7.00	1.74	9.15	8.00	2.00	2.00
New England Corn Phosphate	.18	1.53	1.71	1.64	7.79	2.21	10.00	8.00	1.63	11.63	9.00	3.00	3.00
New England Ground Bone	.....	.....	2.64	2.46	.....	.....	.....	.....	.....	25.78	23.00	.....	.....
New England High Grade Potato Fertilizer	.18	2.32	2.50	2.46	5.18	3.42	8.60	8.00	1.84	10.44	9.00	6.00	6.00

Composition of Commercial Fertilizers Sampled and Analyzed in 1913—Continued.

MANUFACTURER AND BRAND.	NITROGEN.				PHOSPHORIC ACID.							POTASH.	
			Total.				Available.			Total.			
	Inorganic.	Organic.	Found.	Guaranteed.	Soluble.	Reverted.	Found.	Guaranteed.	Insoluble.	Found.	Guaranteed.	Found.	Guaranteed.
NEW ENGLAND FERTILIZER CO.—*Continued.*													
New England High Grade Special with 10% Potash	.27	3.39	3.66	3.60	5.08	3.32	8.40	7.00	1.90	10.30	8.00	10.40	10.00
New England Market Garden Manure	.34	3.83	4.17	4.10	6.59	1.37	7.96	7.00	2.18	10.14	10.00	7.10	7.00
New England Potato Fertilizer	.14	1.62	1.76	1.64	4.90	2.27	7.17	7.00	1.63	8.80	8.00	4.03	4.00
New England Potato Grower with 10% Potash	.27	2.21	2.48	2.46	5.74	1.64	7.38	6.00	1.63	9.01	7.00	10.78	10.00
New England Super-Phosphate for all Crops	.35	2.13	2.48	2.46	6.99	2.20	9.19	8.00	2.84	12.03	9.00	4.03	4.00
Muriate of Potash	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	50.44	50.00
Nitrate of Soda	.....	.....	15.38	15.00	.....	.....	.....	.....	.....	.....	.....	.....	.....
NITRATE AGENCIES CO., Boston, Mass.													
Ground Bone	.....	.....	2.71	2.46	.....	.....	.....	.....	.....	23.98	22.88	.....	.....
Ground Tankage	.....	.....	5.72	5.75	.....	.....	.....	.....	.....	17.30	13.73	.....	.....
Muriate of Potash	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	48.16	50.00
High Grade Acid Phosphate	.....	.....	.....	.....	15.41	1.02	16.43	14.00	1.98	18.41	.....	.....	.....
PAN AMERICAN FERTILIZER CO., Norfolk and New York.													
Pan American Vegetable and Potato Special	2.14	1.10	3.24	3.28	4.28	2.51	6.79	6.00	1.87	8.66	7.00	10.04	10.00
OLDS & WHIPPLE, Hartford, Conn.													
Olds & Whipple Complete Tobacco Fertilizer	1.33	3.79	5.12	4.50	.83	2.45	3.28	3.00	.95	4.23	3.00	5.53	5.50

Parmenter & Polsey Fertilizer Co.,													
Boston, Mass.													
Muriate of Potash	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	50.02	50.00
Nitrate of Soda	.....	.....	15.46	15.00	.....	.....	.....	.....	.....	.....	.....	.....	.....
P. & P. Aroostook Special	.28	3.65	3.93	3.69	4.30	3.42	7.72	7.00	2.18	9.90	8.00	10.40	10.00
P. & P. Plymouth Rock Brand for all Crops	.18	2.30	2.47	2.46	6.48	2.11	8.59	8.00	2.06	10.65	9.00	3.98	4.00
P. & P. Potato Grower with 10% Potash	.33	2.13	2.46	2.46	4.73	2.40	7.13	6.00	1.63	8.76	7.00	10.00	10.00
P. & P. Special Potato Fertilizer for Potatoes and Root Crops	.30	3.21	3.51	3.28	5.00	5.02	10.02	8.10	2.16	12.18	8.00	7.05	7.00
Rogers & Hubbard Co.,													
Middletown, Conn.													
All Soils—All Crops Phosphate	2.61	.89	3.50	3.30	6.23	2.03	8.26	8.00	3.35	11.61	9.00	8.02	7.00
Complete Phosphate	.80	.78	1.58	1.50	5.20	2.14	7.34	7.00	4.12	11.46	8.00	5.08	5.00
Fruit or Grass and Grain Fertilizer	.43	1.86	2.29	2.20	1.19	9.06	10.25	6.50	7.59	17.84	16.00	12.66	12.00
New Market Garden Phosphate	.90	1.12	2.02	2.00	5.54	1.23	6.77	6.00	3.24	10.01	7.00	10.03	10.00
Oats and Top-Dressing	7.73	.87	8.60	8.50	3.10	1.50	4.60	4.50	4.00	8.86	8.00	8.29	8.00
Potato Phosphate	1.19	.53	2.02	2.00	5.18	4.25	9.43	9.00	2.55	11.98	10.00	5.39	5.00
Soluble Corn and General Crops Manure	1.49	1.01	2.50	2.50	2.98	2.98	5.96	6.00	4.21	10.10	8.00	9.02	8.00
J. W. Sanborn,													
Pittsfield, N. H.													
Prof. Sanborn's Chemical Fertilizer for Grass and Grain	5.04	.20	5.24	4.75	3.59	2.41	6.00	4.50	2.05	8.05	6.00	6.22	5.75
Prof. Sanborn's Chemical Fertilizer for Fall Seeding to Grass	.80	1.47	2.27	2.20	6.89	1.12	8.01	7.00	2.35	10.36	9.50	8.51	8.00
Prof. Sanborn's Chemical Fertilizer for Potatoes and Corn	1.53	1.97	3.50	3.50	7.71	1.51	9.22	7.00	2.78	12.00	9.50	7.92	8.00
Prof. Sanborn's Chemical Fertilizer for Use in Hill and Drill	1.72	.78	2.50	2.40	6.98	.67	7.65	7.00	5.18	12.83	11.50	4.57	4.00
Prof. Sanborn's Competitor for Hoed Crops in the Drill	1.50	1.07	2.57	2.00	3.31	6.19	9.50	7.00	2.91	12.41	11.00	4.30	2.50
Prof. Sanborn's Special Grass Fertilizer for Acid Soils	5.48	.21	5.69	5.00	3.48	3.19	6.67	5.00	2.03	8.70	7.50	7.20	6.60
Frank Smith & Co.,													
Lancaster, N. H.													
For Seeding Grain, Potatoes and Corn	4.10	.34	4.44	3.00	6.21	1.33	7.54	8.04	4.03	8.57	.....	11.88	10.00
Top-Dressing	6.38	.00	6.37	5.52	6.83	.37	7.20	7.00	1.85	9.05	.....	8.18	6.60
The Pulverized Manure Co.,													
Chicago, Ill.													
Wizard Brand Manure, Pulverized Sheep	.....	.....	2.04	1.80	.....	.....	.....	.....	.....	2.03	.....	2.10	1.00
Whitman & Pratt Rendering Co.,													
Lowell, Mass.													
Whitman & Pratt's Pure Ground Bone	.....	.....	3.05	2.46	.....	.....	.....	.....	.....	25.90	25.00	.....	.....

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